

REMARKS

The present amendment is in response to the Office Action dated December 31, 2003. Claims 1-12 are pending. Applicants have canceled Claims 13-18, although Applicants reserve the right to pursue these claims in one or more future related applications. Claims 1-12 were rejected under 35 U.S.C. § 112, second paragraph, because the Examiner was not clear about the term "relatively thin" as used in Claim 1. Applicants have therefore amended Claim 1 to remove the term in order to obviate the rejection. And, although it was not mentioned in the Office Action, Applicants have also amended Claim 7 in the same manner for consistency.

Claims 1, 2, 4, 6-9, and 11-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Speakman in view of Tohzuka and Bhatia et al. Applicants note that Claims 3 and 10 were not rejected (see Office Action mailed June 4, 2003) and are therefore allowable, and Applicants respectfully request an indication of the allowability of these claims in the next communication from the Office.

Regarding the rejections under Section 103(a), the Office Action simply reiterates the rejection from the Office Action mailed June 4, 2003, except that a new reference (Bhatia et al.) was inserted in an attempt to show obviousness in using a thermosetting stabilizer material in a bearing assembly, and more particularly a bearing assembly for a truck pivot joint bearing in an aircraft landing gear. Applicants strongly disagree with the rejection.

In particular, Speakman does not teach or suggest a PTFE-based material, as Speakman is directed to reducing high stress areas of a bearing by rounding sharp edges and moving a circumferential grease channel from the outer surface of a shaft to the inner surface thereof. One of ordinary skill in the art would not look for another type of lubricant material to use in conjunction with the grease taught by Speakman in order to improve the bearing operation, but instead would seek to smooth edges and remove structural features that create stress concentrations.

Despite Speakman's lack of teaching or suggestion of a PTFE-based material, the Office Action maintains an improper attempt to combine Speakman with Tohzuka, which discloses a PTFE-based material in a grease medium. However, Tohzuka is directed to creating a fluorine-containing grease that has improved homogeneity and storage capacity. As such, Tohzuka

teaches a grease comprising a fluorine-containing oil and PTFE that is formed by using a fluorine-containing solvent and perfluoroalkyl polyther.

It has long been known that for a proper obviousness rejection there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by an applicant. *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988 (“teachings of references can be combined only if there is some suggestion or incentive to do so.”)) (emphasis in original) (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984)). In addition, there must be specificity in the suggestion or teaching to combine the references. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000) (“particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.”); *In re Rouffet*, 149 F.3d 1350, 1359 (Fed. Cir. 1998) (“[E]ven when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.”).

The Office Action does not adequately address the issue of motivation to combine Speakman, Tohzuka, or Bhatia et al., nor can it. Regarding Speakman and Tohzuka, one of ordinary skill in the art would not look to Speakman for the teaching of a PTFE-containing material to be used in conjunction with a grease. Without a proper teaching or suggestion to combine Speakman and Tohzuka, the rejection cannot stand. That is the case here, as Speakman and Tohzuka each address a problem entirely different than the other. The fact that one reference cites a bearing assembly and the other reference cites a PTFE-containing grease does not finish the equation.

Even if, hypothetically, Speakman and Tohzuka were combined, the combination would still not result in the assembly of the presently claimed invention, with or without Bhatia et al. As one of ordinary skill in the art would know, the PTFE-based material cited in the present claims is not a grease, such as the grease disclosed by Tohzuka. Instead, the PTFE-based coating

is a polyester, thermosetting, resin-based material having a distinct coefficient of friction that is applied one of a number of ways, including spraying, brushing on, or dipping into a bath of the material. Neither Speakman nor Tohzuka teach or suggest such a coating applied to one surface of a bearing component that acts in conjunction with a grease. Because the proposed combination of Speakman and Tohzuka is not properly combinable, the currently proposed combination of Speakman, Tohzuka, and Bhatia et al. also cannot stand.

Bhatia et al. are directed to methods of dispersing solid additives, not to “reduce thermal degradation [sic] in high temperature applications” as stated in the Office Action. The section of the Bhatia et al. specification cited in the Office Action (Column 13, line 43 - Column 14, line 5) discusses an example of the Bhatia et al. process that includes “0.05 parts of a heat stabilizer,” although the example does not mention the importance or use of the heat stabilizer for any particular purpose. However, upon reading the Bhatia et al. patent, it becomes clear that the process is directed to dispersing PTFE in a substance (e.g., a polycarbonate) to provide advantageous physical properties, such as impact strength, flammability, ductility, tensile strength, and tensile elongation. In particular, column 12 of Bhatia et al. discloses the basic process, wherein a PTFE latex and a polycarbonate solution are mixed and directed through a nozzle where super heated steam is added to vaporize a solvent and water. As such, the polycarbonate encapsulates the PTFE to form coprecipitate particles ranging from 5 micron to 5 millimeters. Accordingly, the application of heat to the PTFE and polycarbonate mixture is critical to forming the desired coprecipitate particles, and the addition of the “heat stabilizer” is to regulate the application of heat to bring about the desired diameter of the particles.

Therefore, the “heat stabilizer” mentioned in the Office Action is not a “thermosetting stabilizer.” Not only are the words clearly different, but they describe different agents with different functions. In addition, the Bhatia et al. reference is only tangentially relevant to the other references, if that. More importantly, there is no teaching or suggestion to combine Bhatia et al. with Speakman and/or Tohzuka as attempted in the Office Action. As described above, Bhatia et al. are directed to an entirely different goal and provides entirely different solutions than Speakman and/or Tohzuka. It is clear that the Examiner merely looked for a reference that contained the terms “PTFE” and “stabilizer” and attempted to combine it with the other

references, which in fact are not properly combinable themselves as described above. A simple search of recent patents on the PTO website revealed over 60 other patents with the terms "PTFE" and "heat stabilizer," each likely having the same amount of relevance to the present invention as the Bhatia et al. reference cited in the Office Action. Notably, no recent patents were found with the terms "PTFE" and "thermosetting stabilizer."

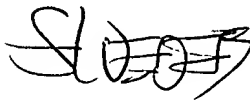
It is folly to argue that the combination of Speakman, Tohzuka, and Bhatia et al. would suggest the presently claimed invention to one of ordinary skill in the art, and Applicants respectfully submit that the rejections of Claims 1, 2, 4, 6-9, and 11-12 be withdrawn immediately and a Notice of Allowance of all the claims be issued.

Applicants also have added new Claims 19 and 20, which describe a bearing assembly whereby a first space is defined between two bearing surfaces and a greaseless material is applied to one of the bearing surfaces and that occupies less than the first space, and a grease material occupying or filling a remaining space defined between the greaseless material and the other bearing surface, i.e., the leftover space of the first space that is not occupied by the greaseless material (see page 8, lines 31-34 of the present application). Claims 19 and 20 further distinguish the presently claimed invention by clearly defining the spaces occupied by the greaseless material and grease material, and Applicants respectfully request an immediate Notice of Allowance for these claims as well. The Examiner is encouraged to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite Examination of the claimed invention.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

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Respectfully submitted,

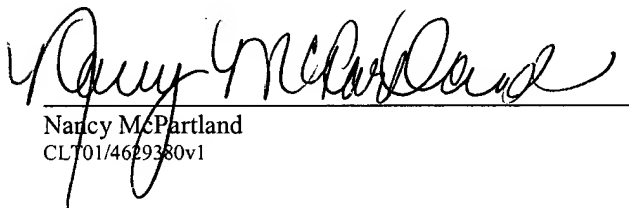


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